

# INTERNATIONAL SEARCH REPORT

PCT/GB 03/05086

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C01B3/26 D01F9/127 D01F9/133

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C01B D01F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 227 062 A (LENTEK S P A) 31 July 2002 (2002-07-31) the whole document	1-11
A	EP 1 188 801 A (ERACHEM EUROP SA) 20 March 2002 (2002-03-20) the whole document	1-11
A	US 6 315 977 B1 (CANTACUZENE SERBAN) 13 November 2001 (2001-11-13) the whole document	1-11
X	US 4 650 657 A (BROOKS EDWARD F) 17 March 1987 (1987-03-17) the whole document	12



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

2 August 2004

Date of mailing of the international search report

10/08/2004

Name and mailing address of the ISA

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## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-11

Method and apparatus for the conversion into carbon and hydrogen of gaseous hydrocarbons by reaction using a catalyst and using the energy generated by burning the hydrogen produced.

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2. claim: 12

A process for the preparation of fibrous carbon which comprises contacting a metallic catalyst with a carbon-containing gas at elevated temperature, characterized in that said catalyst is sponge iron

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1227062	A	31-07-2002	IT MI20010138 A1	26-07-2002
			EP 1227062 A1	31-07-2002
			US 2002100216 A1	01-08-2002
EP 1188801	A	20-03-2002	EP 1188801 A1	20-03-2002
			AU 1393802 A	02-04-2002
			BR 0113976 A	29-07-2003
			CN 1458966 T	26-11-2003
			WO 0224819 A1	28-03-2002
			JP 2004510014 T	02-04-2004
			US 2004045808 A1	11-03-2004
US 6315977	B1	13-11-2001	FR 2790750 A1	15-09-2000
			CA 2299667 A1	10-09-2000
			CN 1266813 A	20-09-2000
			EP 1036756 A1	20-09-2000
			JP 2000281304 A	10-10-2000
US 4650657	A	17-03-1987	US 4591334 A	27-05-1986
			US 4767737 A	30-08-1988
			US 4743431 A	10-05-1988